



Frederick County's Sustainability Goals, Actions, and Progress

October 16, 2015

FCC Institute for Learning in Retirement

***Frederick County Office of Sustainability
and Environmental Resources***



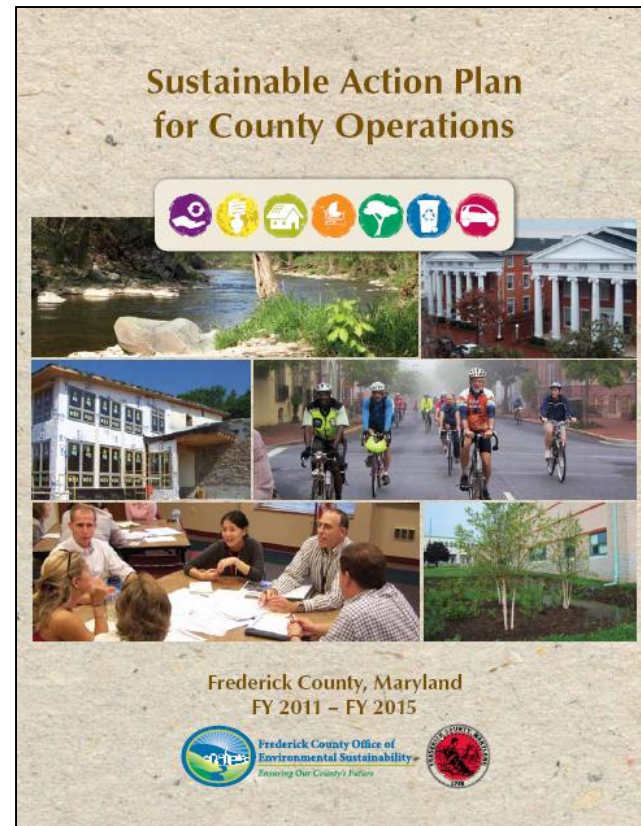
OUR COMMITMENT



The Office of Sustainability and Environmental Resources advances practical solutions for protecting the environment, conserving energy, and living sustainably in Frederick County.

SUSTAINABLE ACTION PLAN

- For County Operations
- Developed by Internal Team
- Adopted in 2010
- Seven Goal Areas
- Action Items





SAP GOAL AREAS

- ❖ Leading by example
- ❖ Conserving energy and reducing emissions
- ❖ Implementing green building practices
- ❖ Making green purchasing decisions
- ❖ Protecting our green infrastructure
- ❖ Recycling and reducing waste
- ❖ Choosing transportation alternatives



ENERGY & EMISSIONS

Goals:

Reduce the use of non-renewable energy 50% by 2024.

Reduce greenhouse gas emissions by 25% by 2025.

Actions:

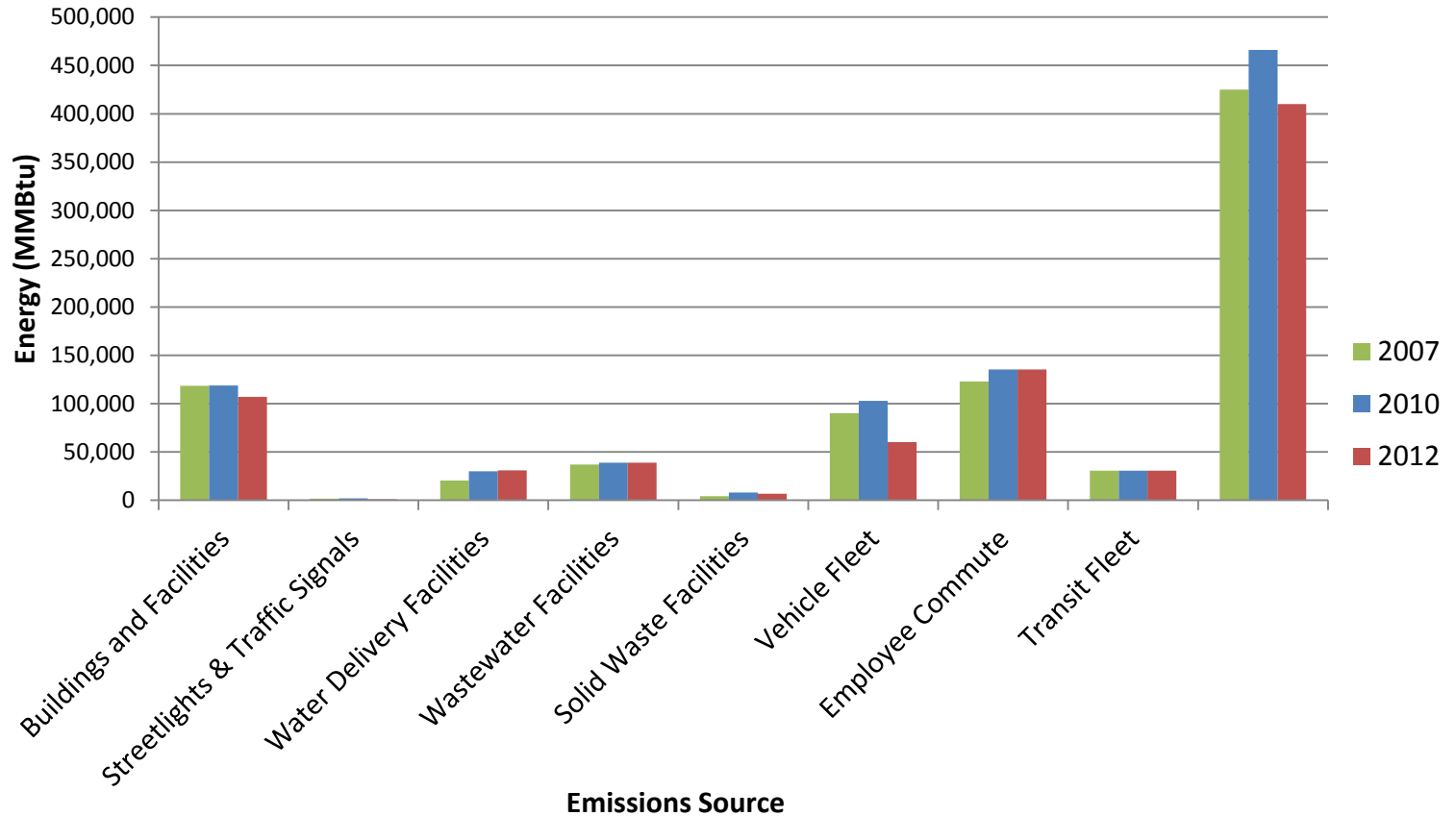
- ✓ Prepared a Comprehensive Energy Plan
- ✓ Adopted Maryland Smart Energy Community Goals
- ✓ Measured Baseline Energy Use and Tracked Progress
- ✓ **Reduced Energy Consumption 3.5% from 2007 to 2012!**
- ✓ Endorsed the U.S. Mayors Climate Protection Agreement
- ✓ Conducted a GHG Emissions Inventory Baseline in 2007; Updated in 2010 and 2012
- ✓ Implemented Landfill Gas to Energy (LGE) project
- ✓ Switched Traffic and Signal Lights to LEDs
- ✓ Completed Building HVAC, Roofing and Lighting Projects
- ✓ **Reduced GHG 10.5% between 2007 and 2012!**





ENERGY & EMISSIONS

2007/2010/2012 Energy Usage by Sector

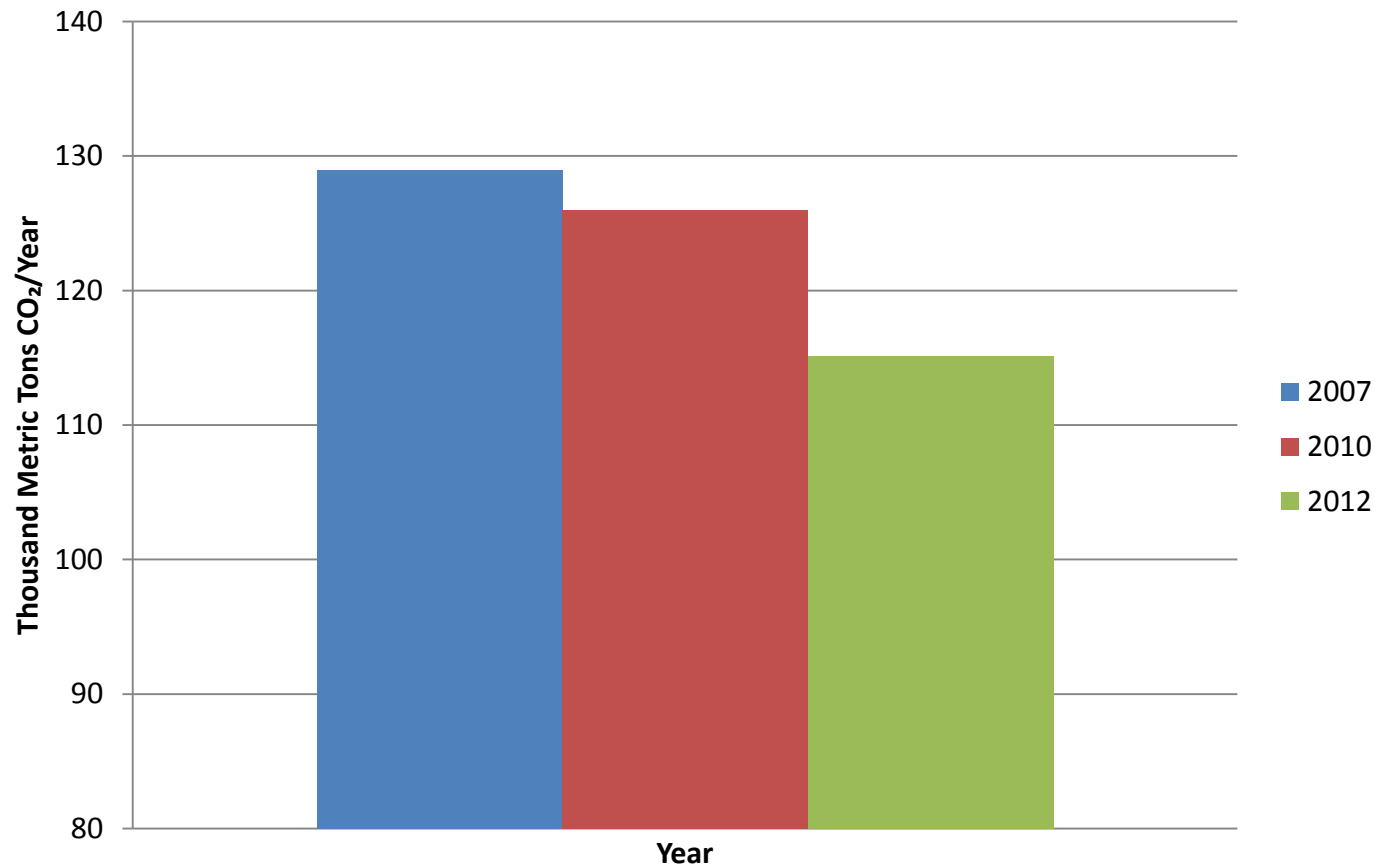


15,022 BTU equivalents were saved between 2007 and 2012!



ENERGY & EMISSIONS

2007/2010/2012 Total Equivalent CO₂



13,777 metric tons of CO₂e were saved between 2007 and 2012!



TRANSPORTATION

Goals:

Reduce non-renewable energy consumption by the FCG fleet and employees.

Improve local air quality conditions by encouraging transportation alternatives.



Actions:

- ✓ Purchased 19 hybrid vehicles, 5 electric cars
- ✓ Implemented fuel conservation plans.
- ✓ Provided employees with remote access, webinars, and teleconferencing.
- ✓ Converting to electric buses, installing charging infrastructure

GREEN INFRASTRUCTURE

Goal:

Protect and restore Frederick County's network of green infrastructure.



Actions:

- ✓ Developed a Green Infrastructure Assessment with state and federal partners to identify areas with key natural resource functions, and gaps
- ✓ Conducted over 713 acres of reforestation and water quality retrofits to date with goals for additional 20% of untreated acres by 2020.
- ✓ Improved winter road treatment practices
- ✓ Coordinated the non-advocacy Monocacy and Catoctin Watershed Alliance.
- ✓ Created and manage a risk reduction program for industrial sites



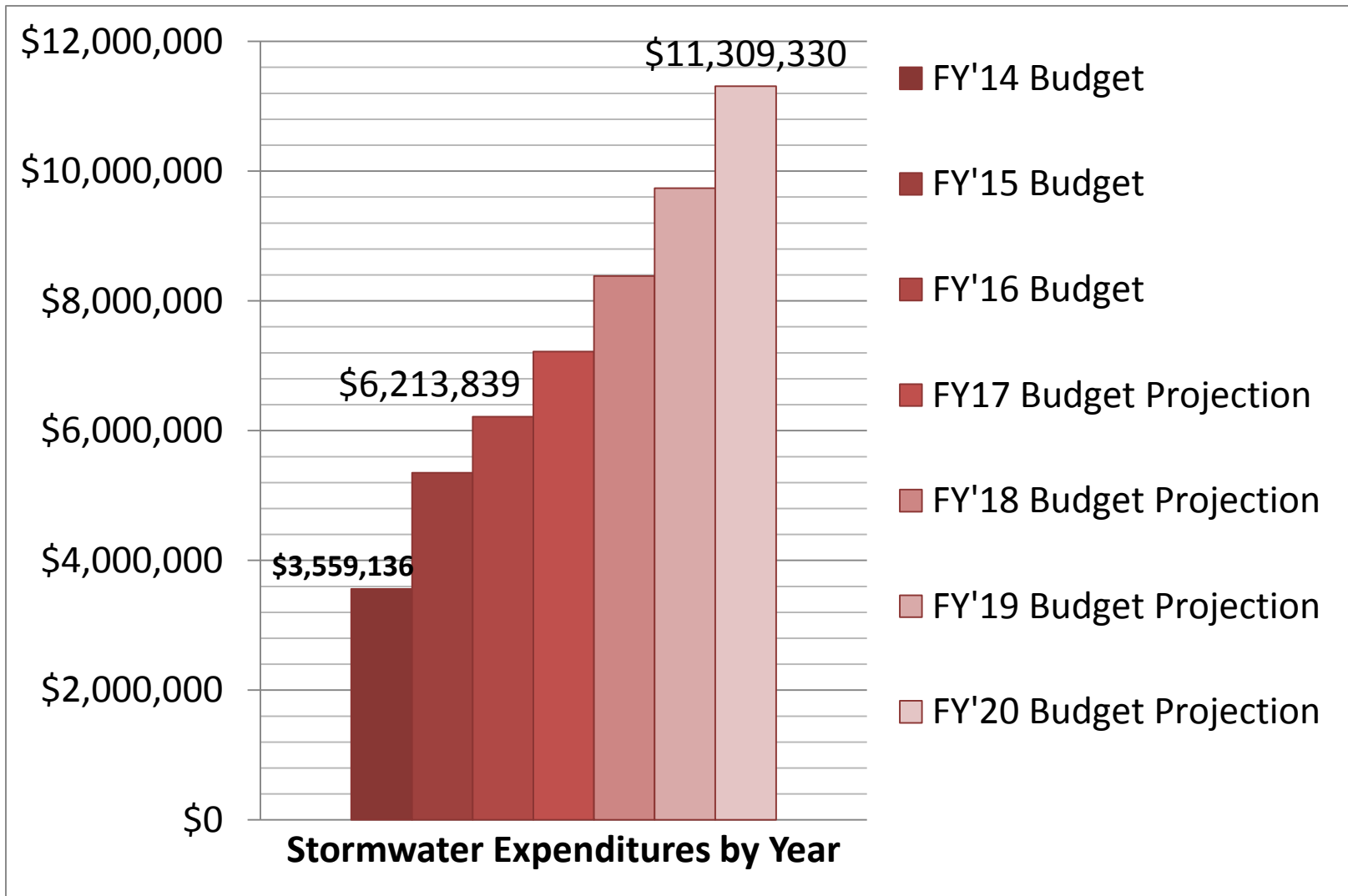
GREEN INFRASTRUCTURE

Completed 713 acres of 672-acre watershed restoration goal:

- 125 ac. CIP projects;
- 129 ac. Watershed Alliance partner projects;
- 55 ac. Street Sweeping (Highway Operations);
- 413 ac. Community Restoration Projects



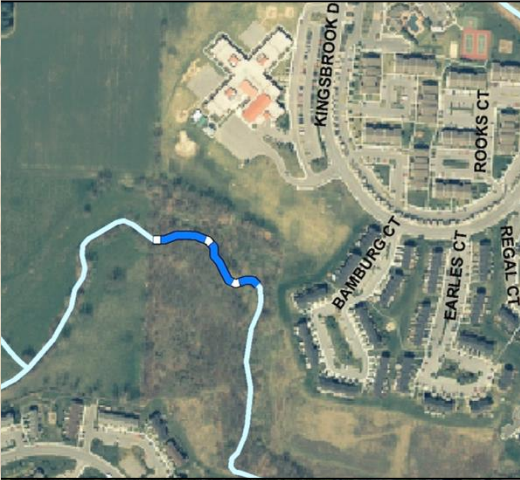
GREEN INFRASTRUCTURE





GREEN INFRASTRUCTURE

Ballenger Creek Stream Restoration CIP example



- Restored channel at Ballenger Creek Elementary School;
- Multiple benefits provided through coordination with FCPS, DUSWM, Parks;
 - Stabilized banks, reduced sediment, removed debris jams;
 - Protected sewer line from stream;
 - Created area for Ballenger Creek trail on bank and saved Parks \$415K from having to install pedestrian bridge;
 - Improved habitat for fish, birds, other organisms

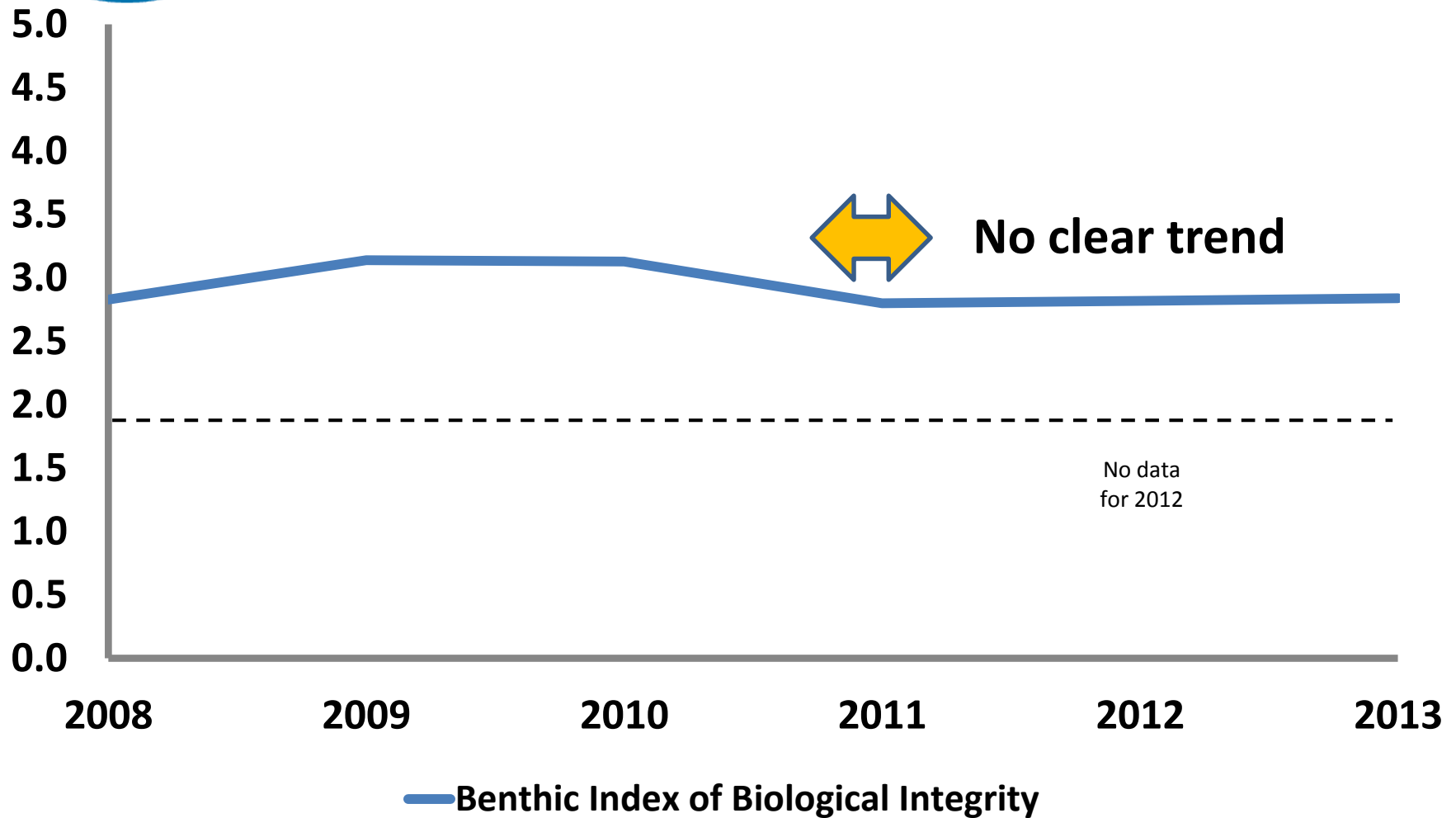


COMMUNITY SUSTAINABILITY

- **Sustainability Indicators**
 - Adopted by Sustainability Commission
 - Social, Economic, Environmental Factors
 - Captured by Different Sources Annually
 - 2015 Focus on Key Issues: Land use, Solid Waste, Energy
- **Green Homes Challenge**
- **Property Assessed Clean Energy (PACE) Loans**

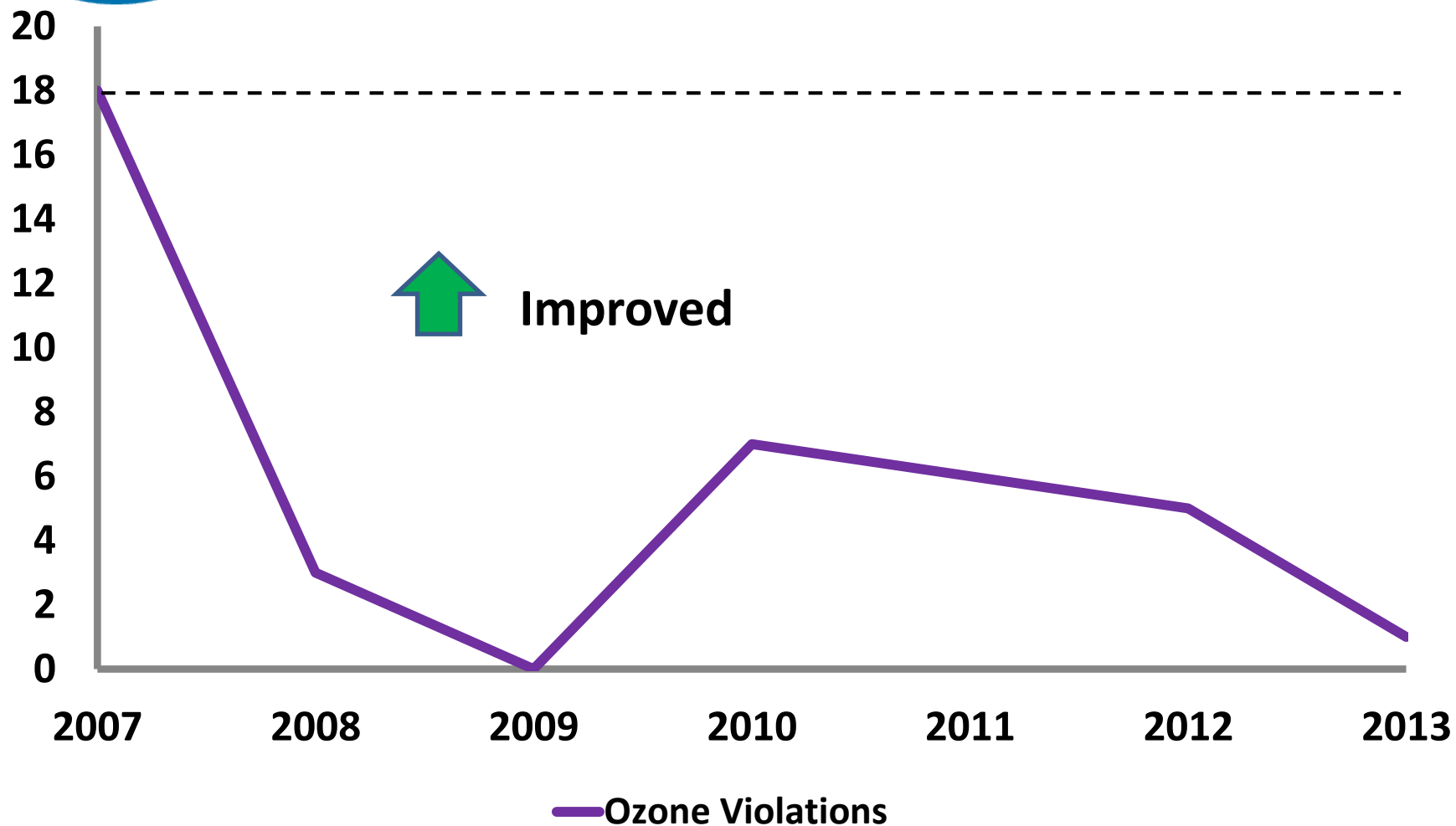


FCSC INDICATORS: WATER



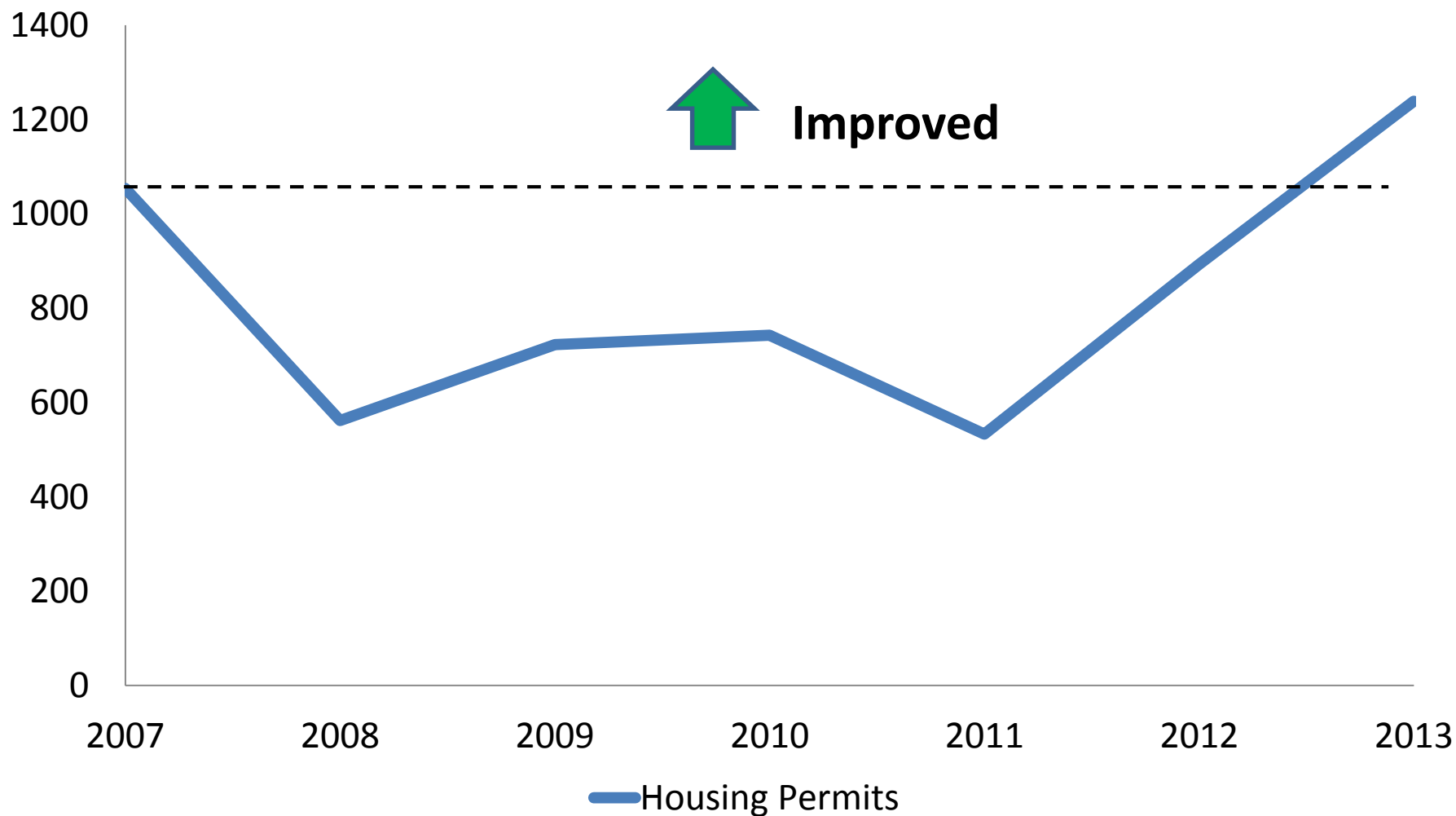


FCSC INDICATORS: AIR



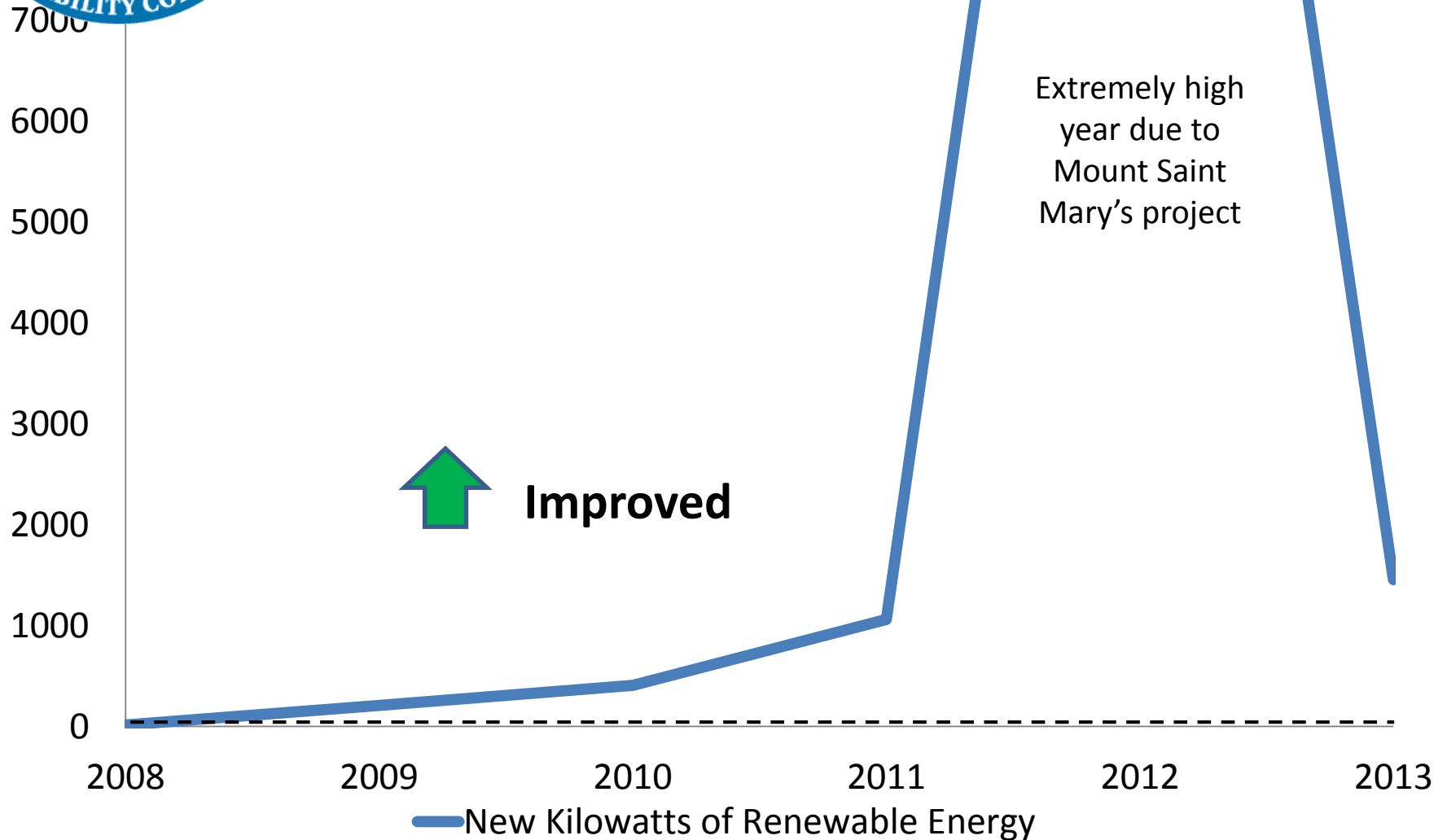


FCSC INDICATORS: ECONOMY



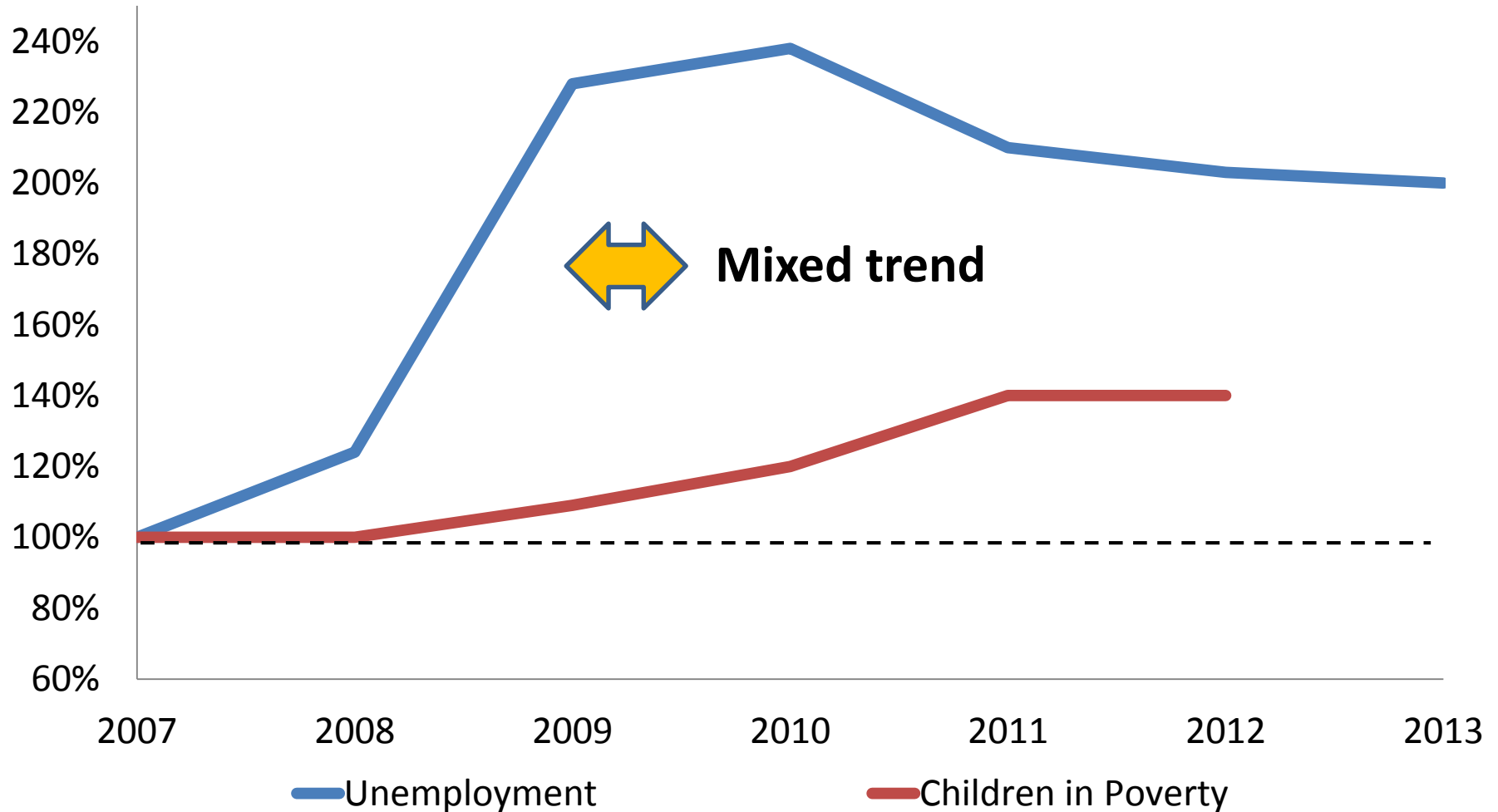


FCSC INDICATORS: ENERGY





FCSC INDICATORS: SOCIAL





THE GREEN HOMES CHALLENGE



www.frederickgreenchallenge.org



THE GREEN HOMES CHALLENGE

Challenge 1: Be a Power Saver

Save Our Energy, Bank Your Money!

Helps residents reduce energy consumption and utility bills



Challenge 3: Be a Renewable Star

Renew Your Energy, Clear Our Air!

Helps residents use renewable energy



Challenge 2: Be a Green Leader

Green Your Lifestyle, Protect Our Resources!

Helps residents adopt environmentally-friendly practices



THE GREEN HOMES CHALLENGE

ESTIMATED TOTAL ANNUAL SAVINGS ACROSS FREDERICK COUNTY

TOTAL DOLLARS SAVED



\$ 9 5 9 , 3 9 9



Total metric tons of CO₂ reduced

9,345



Total kilowatt-hours of electricity saved

6,561,027



Total gallons of water saved

29,873,304



Total gallons of gasoline saved

110,192



THE GREEN HOMES CHALLENGE

Special Initiatives

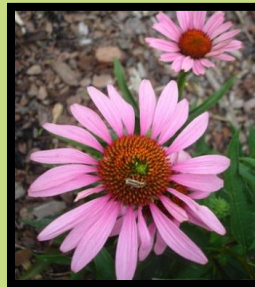
Power Saver

- **Power Saver Retrofits**
 - ~300 homes retrofitted
- **Refrigerator Exchange Program**
 - ~ 243 Households



Green Leader

- **Neighborhood Green**
 - ~ 190 households get native trees and shrubs planted
- **Expanded Neighborhood Green**
 - ~ 150 households



Renewable Star

- **Solarize Frederick County**
 - 66 Solar Electric
 - 12 Solar Hot Water





COMMERCIAL SUSTAINABILITY

- **Property Assessed Clean Energy (PACE) Loans**
 - Lien is on Taxes and is on Tax Bill
 - Funds Borrowed are for Energy Projects
 - Commercial and Industrial Properties are Eligible
 - Fills a Commercial Lending Void
 - Project Costs Can be Offset by Savings and Can Show Excellent Return on Investment
 - Frederick County Govt May Partner with Maryland Clean Energy Center to Implement

Questions



Comments

Questions



Comments